

CLAIMS

WHAT IS CLAIMED IS:

1. A method of detecting rotation of at least one printer component, comprising:
forming at least one pattern on a marking material receiving part;
moving said marking material receiving part past a sensor configured to detect the presence of said pattern;
sensing said marking material receiving part with said sensor; and
selectively operating a printing system in response to a positive detection of said pattern.
2. The method of claim 1, further comprising preventing an operation of said printing system if said print pattern is not detected.
3. The method of claim 1, wherein said pattern comprises a line.
4. The method of claim 1, wherein said marking material receiving part comprises a transfer belt.
5. The method of claim 1, wherein said marking material receiving part comprises a media sheet.
6. The method of claim 5, wherein said media sheet comprises one of a sheet of paper or a plastic sheet.
7. The method of claim 1, wherein said sensor is further configured to perform a color plane registration operation.

8. The method of claim 1, wherein said forming and said sensing said marking material receiving part is performed during a startup of said printing system.

9. The method of claim 1, wherein said component comprises a rotating printer cartridge component.

10. The method of claim 9, wherein said rotating printer cartridge component comprises an organic photo conductor.

11. The method of claim 1, further comprising:
detecting a rotation of a plurality of printer components;
wherein said detecting a rotation of a plurality of printer components includes forming a plurality of patterns on said marking material receiving part, each of said plurality of patterns corresponding to one of said plurality of printer components; and
preventing an operation of said printing system if one or more of said patterns is not detected.

12. The method of claim 11, wherein said plurality of components comprise organic photo conductors.

13. The method of claim 11, wherein said patterns comprise a series of spaced lines.

14. The method of claim 11, wherein said marking material receiving part comprises a transfer belt.

15. The method of claim 11, wherein said marking material receiving part comprises a media sheet.

16. The method of claim 15, wherein said media sheet comprises one of a sheet of paper or a sheet of plastic.

17. The method of claim 11, wherein said sensor is further configured to perform a color plane registration operation.

18. The method of claim 11, wherein forming said pattern is performed during a startup of said printing system.

19. The method of claim 11, wherein said components comprise rotating print cartridge components.

20. The method of claim 11, further comprising providing a prompt if one or more of said patterns is not detected, wherein said prompt is configured to prompt the reengagement of said print cartridges.

21. The method of claim 20, further comprising reengaging said print cartridges.

22. The method of claim 21, wherein said reengaging said print cartridges restarts said method.

23. A method for starting up a printing system, comprising:
conducting a rotation detection operation, said rotation detection operation including forming a plurality rotation detection marks on a marking material receiving part corresponding to a plurality of print cartridges, conveying said marking material receiving part past a sensor to detect a presence of said rotation detection marks, and preventing an operation of said printing system in response to a non-detection of said pattern; and
performing a color plane registration operation, said color plane registration operation including forming a plurality of alignment marks on said marking

material receiving part, and conveying said marking material receiving part past said sensor.

24. The method of claim 23, further comprising continuing an operation of said printing system in response to a detection pattern.

25. The method of claim 23, wherein said rotation detection marks comprise a subset of said alignment marks.

26. The method of claim 23, wherein said rotation detection marks are separate from said alignment marks.

27. A printing system, comprising:
a plurality of print cartridges, each of said print cartridges having a developer and an organic photo conductor;
at least one print cartridge configured to form a rotation detection and an alignment mark on a marking material receiving part during a startup operation;
at least one sensor configured to sense said rotation detection and alignment marks; and
a controller configured to control a rotation detection process and a color sub-image alignment process.

28. The system of claim 27, wherein said plurality of print cartridges comprise a cyan ink filled print cartridge, a magenta ink filled print cartridge, a yellow ink filled print cartridge, and a black ink filled print cartridge.

29. The system of claim 27, wherein said marking material receiving part comprises an intermediate transfer belt.

30. The system of claim 27, wherein said marking material receiving part comprises an electronic transfer belt.

31. The system of claim 27, wherein said sensor comprises an optical sensor.

32. The system of claim 27, wherein said sensor comprises a density sensor.

33. A printing system, comprising:
means for forming a rotation detection mark;
means for detecting the presence of said rotation detection mark; and
means for selectively preventing operation of said printing system if said rotation detection mark is not detected by said means for detecting.

34. The printing system of claim 33, further comprising means for allowing an operation of said printing system in response to a detection of said detection marks.

35. The printing system of claim 33, wherein said means for forming rotation marks further comprises means for forming alignment marks.

36. The printing system of claim 35, wherein said means for detecting said rotation detection marks is also configured to detect said alignment marks.